

**Notice of Allowability**

Application No.

10/035,144

Applicant(s)

LI ET AL.

Examiner

Art Unit

Amir Alavi

2621

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to The Original filing of 04 January 2002.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☒ The drawings filed on 04 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## REASONS FOR ALLOWANCE

- The following is an examiner's statement of reasons for allowance: The present invention is directed towards a focus control method for Delta-Sigma based image formation devices. The closest prior art, Ishibashi et al. (USPN 6,454,713 B1), shows a similar system, in which, an ultrasonic therapeutic apparatus consisting of a therapeutic ultrasonic wave generating source driven by a driver circuit to generate therapeutic ultrasonic waves, an in vivo imaging probe so as to obtain a tissue tomographic image in the vicinity of the focus of the therapeutic ultrasonic waves, the imaging probe is used to receive echoes of the ultrasonic pulses emitted from the therapeutic ultrasonic wave generating source, the driving conditions for the therapeutic ultrasonic wave generating source is adjusted on the basis of a received echo signal. However, Ishibashi et al. fail to address: "for wherein control the delay change of two channels with the same controller thereby saving half of said controllers, and performing dynamic control the aperture of a probe and eliminating noise during dynamic focusing so as to maintain a single bit output thereby finally forming a beam signal required for an image by the Delta-Sigma based image formation device and maintaining quality of an image with compensation by summing up added values". These distinct features have been added to the sole independent claim and renders it allowable.

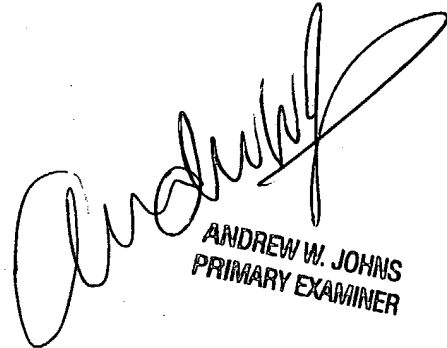
- Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Contact Information**

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amir Alavi whose telephone number is 703-306-5913.
- The examiner can normally be reached on Mon-Thu.. 8:00 am thru 6:30pm.If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo Boudreau can be reached on 703-305-4706.

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- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.
- For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ANDREW W. JOHNS  
PRIMARY EXAMINER

AA  
Group Art Unit 2621  
16 December 2004